

## REMARKS

This Amendment is submitted in reply to the final Office Action dated April 12, 2007. No fee is due in connection with this Amendment. The Director is authorized to charge any additional fees which may be required, or to credit any overpayment to Deposit Account No. 02-1818. If such a withdrawal is made, please indicate the Attorney Docket No. 115808-365 on the account statement.

Claims 1, 3-4, 6, 8, 10-11, 14, 16, 18 and 63-64 are pending in this application. Claims 2, 5, 7, 9, 12-13, 15, 17 and 19-22 were previously canceled. Claims 23-62 were previously withdrawn. In the Office Action, Claims 1 and 4 are rejected under 35 U.S.C. §112, first paragraph, Claims 1, 4, 6, and 10 are rejected under 35 U.S.C. §102 and Claims 1, 3-4, 6, 8, 10-11, 14, 16, 18 and 63-64 are rejected under 35 U.S.C. §103. In view of the amendments and/or for the reasons set forth below, Applicants respectfully submit that the rejections should be withdrawn.

In the Office Action, Claims 1 and 4 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. Specifically, the Patent Office first alleges that Claims 1 and 4 are drawn to plant material and to the plant family *Asteracea* but that the specification lacks sufficient disclosure to be in possession of the genus at the time of filing. In response, Applicants have amended Claims 1 and 4 to recite particular phytochemical agents and plant materials. The amendment is fully supported in the specification, for example, at page 8, lines 24-32, page 9, lines 4-11, 23-26 and page 11, lines 8-11. Based on at least these noted reasons, Applicants believe that Claims 1 and 4 fully comply with 35 U.S.C. §112, first paragraph.

Accordingly, Applicants respectfully request that the rejection of Claims 1 and 4 under 35 U.S.C. §112, first paragraph, be withdrawn.

In the Office Action, Claims 1, 4, 6 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,592,033 to Anantharaman et al. ("*Anantharaman*"). Applicants believe this rejection is improper and respectfully traverse it for at least the reasons set forth below.

Independent Claim 1 recites, in part, a thermally processed plant material that includes one or more phytochemical agents capable of inhibiting at least one of enzymatic and

transcriptional activity to inhibit inflammation in a mammal. For example, Applicants have surprisingly discovered that upon thermal processing certain plants and/or plant extracts thereof can be generated with enhanced inhibition of enzyme activity and/or transcription activity in mammals which is believed to reduce the risk of inflammation. See, specification, page 5, lines 23-30. In contrast, Applicants respectfully submit that *Anantharaman* fails to disclose or suggest every element of Claim 1.

Applicants respectfully disagree with the Patent Office's statement that the term "thermally processed" can simply mean "extruded". See, Office Action, page 4, line 4. Instead, Applicants actually disclose that the term "thermally processed" means heating the plant raw material above standard temperature (e.g., 25 Celsius or 278 Kelvins) in a dedicated device, such as an oven or extruder, or any similar device capable of increasing the temperature of the treated material. See Specification, page 7, lines 15-19. Extrusion devices do not necessarily heat the material as well. For example, materials can be cold extruded instead. Therefore, an example of thermally processed plant material can include heat extruded plant material. Furthermore, "thermally processed" can mean treating the plant material at above standard temperatures in a dedicated device such that one or more phytochemical agents capable of inhibiting at least one of enzymatic and transcriptional activity to inhibit inflammation in a mammal are thereafter maintained in the composition. See Specification, page 7, lines 15-19 and Claim 1.

Applicants respectfully submit that *Anantharaman* fails to disclose or suggest every element of Claim 1. For example, Applicants respectfully disagree with the Patent Office's assertion that *Anantharaman* discloses that there are some sesquiterpene lactones still present in the extract. See, Office Action, page 4, lines 21-29. The Patent Office cites column 7, lines 33-34 of *Anantharaman* to support this argument. However, *Anantharaman* teaches the need to destroy or remove these sesquiterpene lactones. See, *Anantharaman*, col. 6, lines 30-34. Furthermore, contrary to the Patent Office's assertion, the section of *Anantharaman* cited by the Patent Office does not disclose that the sesquiterpene lactones are still present. The final mixture is analyzed and "no sesquiterpene lactones are detected". See, *Anantharaman*, col. 7, lines 29-31. The sesquiterpene lactones revealed in the analysis was in the chicory starting ingredient and not in the final mixture. See, *Anantharaman*, col. 7, lines 31-34. Therefore, *Anantharaman* fails to disclose sesquiterpene lactones present in the extract.

Applicants further respectfully submit that *Anantharaman* fails to disclose or suggest a thermally processed plant material that includes one or more phytochemical agents capable of inhibiting at least one of enzymatic and transcriptional activity to inhibit inflammation in a mammal. As discussed above, *Anantharaman* fails to disclose sesquiterpene lactones present in the extract capable of inhibiting at least one of enzymatic and transcriptional activity to inhibit inflammation in a mammal. Therefore, *Anantharaman* fails to disclose thermally treating the plant material in order to inhibit inflammation.

Applicants also disagree with the Patent Office's argument that using the claimed composition to inhibit inflammation in a mammal is an intended use of a composition which will not further limit claims drawn to a composition. Structurally, the present claims require, in part, a plant material that is thermally processed to inhibit at least one of enzymatic and transcriptional activity to inhibit inflammation in a mammal. By contrast, the prior art discloses a composition without any sesquiterpene lactones left in the composition to inhibit cyclooxygenase activity to inhibit inflammation in a mammal. These are significant structural differences, considering that the inflammation inhibiting nature of the present claims is a unique aspect of the invention and is not disclosed or suggested in the prior art. For the reasons discussed above, Applicants respectfully submit that Claims 1 and Claims 4, 6 and 10 that depend from Claim 1 are novel, non-obvious and distinguishable over *Anantharaman*.

Accordingly, Applicants respectfully request that the rejection of Claims 1, 4, 6 and 10 under 35 U.S.C. §102 be withdrawn.

In the Office Action, Claims 1, 3-4, 6, 8, 10-11, 14, 16, 18 and 63-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,645,534 to Hermand ("*Hermand*") in view of *Anantharaman* in further view of U.S. Patent 5,905,089 to Hwang et al. ("*Hwang*"). Applicants believe this rejection is improper and respectfully traverse it for at least the reasons set forth below.

Independent Claim 1 requires, in part, a thermally processed plant material that includes one or more phytochemical agents capable of inhibiting at least one of enzymatic and transcriptional activity to inhibit inflammation in a mammal. Similarly, independent Claim 11 requires, in part, a thermally processed plant material that includes one or more phytochemical agents capable of inhibiting at least one of enzymatic and transcriptional activity to treat inflammation in a mammal. Furthermore, independent Claim 63 requires, in part, a thermally

processed plant material, the active fragment including  $\alpha$ -methylene- $\gamma$ -butyrolactone, wherein the active fragment in an effective amount is capable of inhibiting at least one of enzyme and transcriptional activity to inhibit inflammation. For example, Applicants have surprisingly discovered that upon thermal processing certain plants and/or plant extracts thereof can be generated with enhanced inhibition of enzyme activity and/or transcription activity in mammals which is believed to reduce the risk of inflammation. See, specification, page 5, lines 23-30. In contrast, Applicant respectfully submits that there is no suggestion or motivation to combine the cited references to obtain the present claims, and even if combinable, all of the claimed elements are not taught or suggested by the cited references.

Applicant respectfully submits that the skilled artisan would have no reason to combine the cited references to obtain the present claims because the cited references teach away from each other and the claimed invention. *Hermant* discloses extraction at low temperatures because low temperatures allow good preservation of the resulting extract without the addition of preservative. See *Hermant*, column 1, lines 56-60. *Hermant* also discloses avoiding thermal degradation of the chicory which might possibly denature the active compounds, which teaches away from the claimed invention. See *Hermant*, column 1, lines 60-63. Furthermore, *Hermant* discloses that chicory extract obtained by hot extraction has all the known properties of chicory extract obtained by cold extraction. See, *Hermant*, col. 2, lines 38-42. Thus, one skilled in the art would have no reason to thermally process the plant material of *Hermant* or to combine *Hermant* with another reference to obtain the present claims, since *Hermant* suggests that thermal processing will not alter the properties of the chicory extract. Moreover, *Anantharaman* and *Hwang* fail to disclose a reason to combine *Hermant* with thermal processing to achieve the present invention. Instead, *Anantharaman* discloses destroying or removing sesquiterpene lactones. In addition, *Hwang* discloses sesquiterpene lactones obtained from plant material.

By contrast, structurally the present claims require, in part, a plant material thermally processed to inhibit at least one of enzymatic and transcriptional activity to treat inflammation. Applicants have surprisingly discovered that upon thermal processing certain plants and/or plant extracts thereof can be generated with enhanced inhibition of enzyme activity and/or transcription activity in mammals which is believed to reduce the risk of inflammation. See, specification, page 5, lines 23-30. These are significant structural differences, considering that

the inflammation inhibiting nature of thermally processed plant material of the present claims is a unique aspect of the invention and is not disclosed or suggested in the prior art.

Consequently, *Hermand's* hot extracted chicory extract, having the same properties as cold extracted chicory extract, is readily distinguishable and teaches away from the claimed invention and being combined with *Hwang*. In fact, "a prima facie case of obviousness can be rebutted if the applicant...can show that the art in any material respect 'taught away' from the claimed invention...A reference may be said to teach away when a person of ordinary skill, upon reading the reference...would be led in a direction divergent from the path that was taken by the applicant." *In re Haruna*, 249 F.3d 1327, 58USPQ2d 1517 (Fed. Cir. 2001). See, MPEP 1504.03.

Applicants respectfully submit that the claims must be viewed as a whole as defined by the claimed invention and not dissected into discrete elements to be analyzed in isolation. *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983); *In re Ochiai*, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995). One should not use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d at 1075. (Fed. Cir. 1988).

For at least the reasons discussed above, the skilled artisan would have no reason to combine *Hermand*, *Anantharaman* and *Hwang* to arrive at the present claims. Applicants respectfully submit that the combination of *Hermand* in view of *Anantharaman* and *Hwang* is improper.

Accordingly, Applicants respectfully request that the obviousness rejection with respect to Claims 1, 3-4, 6, 8, 10-11, 14, 16, 18 and 63-64 be reconsidered and withdrawn.

For the foregoing reasons, Applicants respectfully request reconsideration of the above-identified patent application and earnestly solicit an early allowance of same.

Respectfully submitted,

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